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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,411	09/30/2003	Junichiro Suzuki	031128	2707

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EXAMINER

WARTALOWICZ, PAUL A

ART UNIT PAPER NUMBER

1754

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/673,411		SUZUKI ET AL.	
	Examiner		Art Unit	
	Paul A. Wartalowicz		1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/30/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Withdrawn Rejections

The Double Patenting and 35 U.S.C. 112 rejections as shown on Office Action mailed on August 23, 2005, Pages 2 and 4 have been withdrawn due amendments by Applicant. Applicant has withdrawn the Objections to Drawings set forth on Office Action mailed on August 23, 2005, Page 3 due to amendments by Applicant.

Repeated Rejections

The 35 U.S.C 103 rejections of claims 1-9 over Smith et al. ('871) in view of Lee et al. ('854) in further view of Kawazura et al ('008) and Iio et al. ('313) are repeated for the reasons set forth in the previous Office Action mailed August 23, 2005 as follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claim 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. ('871) in view of Lee et al. ('854).

Smith et al. teaches a fuel hose (col. 3, lines 20-23) comprising at least one constituent layer including an inner layer, at least the inner layer comprising a polyester resin (col. 3, lines 60-63). Smith et al. fails to teach particles each having a core-shell structure, the particles being present in a proportion of 5 to 60 parts by weight based on 100 parts by weight of the polyester resin.

Lee et al., however, teaches a polyamide resin composition comprising polybutylene terephthalate (col. 4, line 24) further comprising core-shell rubber system (col. 2, lines 15-18) comprising 0.5-10 weight% of mixture for the purpose of yielding gasoline resistance (col. 1, line 66) and flexibility under cold environment (col. 2, lines 18-20).

Lee et al. further teaches that core-shell resin composition has excellent gasoline resistance and impact resistance under cold environment which is applicable to a fuel tube system for a motor vehicle (col. 1, lines 9-12).

Therefore, one of ordinary skill in the art would have recognized that the core-shell resin composition is advantageous for use in a fuel tube system for the purpose of providing gasoline resistance (col. 1, line 66) and flexibility under cold environment (col. 2, lines 18-20).

Thus, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a core-shell resin composition

comprising polybutylene terephthalate of Lee et al. as the material of the inner layer of Smith et al. in order to provide gasoline resistance and flexibility under cold environment as taught by Lee et al.

As to claim 2, Smith et al. teaches that the inner layer is made conductive by the addition of a conductive agent (col. 3, lines 63-65). As to claim 4, Smith et al. teaches an outermost layer comprising polyamide (col. 3, lines 52-54).

5. Claim 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. ('871) in view of Lee et al. ('854) in further view of Kawazura et al ('008) and Iio et al. ('313).

Smith et al. and Lee et al. teach a fuel hose as described above.

Smith et al. teaches a fuel hose having a tie layer between an inner and outer layer comprising linear low-density polyethylene (col. 4, lines 15-17, 23-26). Smith et al. and Lee et al. fail to teach constituent layers other than the layer comprising the polyester resin and the particles each comprise a polyester material.

Kawazura et al. teaches that it is well known in the resin hose art for a resin hose to be composed of a polyester thermoplastic elastomer including polybutylene terephthalate as a hard segment and polytetramethylene glycol as a soft segment for the purpose of improving the flexibility of a thermoplastic resin (col. 2, lines 24-31).

Since Smith et al. requires that the tube is flexible enough to be shaped in any configuration (col. 3, lines 39-40), one of ordinary skill in the art would have recognized to replace the polyethylene of the tie layer of Smith et al. and Lee et al. with polyester

thermoplastic elastomer of Kawazura et al. to improve the flexibility of a thermoplastic resin as taught by Kawazura et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided polyester in the tie layer of Smith et al. in order to improve the flexibility of a thermoplastic resin as taught by Kawazura et al.

As to claim 5, Smith et al., Lee et al., and Kawazura et al. fail to teach that the intermediate layer has an outer peripheral surface subjected to an electric discharge treatment, wherein a constituent layer provided on the outer peripheral surface of the intermediate layer essentially comprises an amine-rich resin.

lio et al. teaches a hose wherein the intermediate layer (a first layer, col. 1, line 48) having a surface subjected to an electric discharge treatment such as a plasma treatment; and a second layer comprising an amine-rich resin as an essential component for the purpose of bonding to the surface of the first layer (col. 1, lines 50-54).

Smith et al. discloses a tie layer that comprises polyethylene (intermediate layer, col. 4, lines 15-20) that is a commonly recognized tie layer to adhere to polybutylene terephthalate or polybutylene naphthalate. lio et al. discloses an amine-rich thermoresin such as polyolefins on the outer surface of the inner layer that is subjected to an electrical discharge treatment such as a plasma treatment (col. 3, lines 8-11).

Therefore, one of ordinary skill in the art would have recognized to have used the amine-rich polyolefin resin and electrical discharge treatment of lio et al. in place of the

polyolefin tie layer of Smith et al. and Lee et al. in order to bond a second layer to the surface of a first layer as taught by Iio et al.

Response to Arguments

Applicant's arguments filed on November 23, 2005 have been fully considered but they are not persuasive.

Applicant argues that the Smith et al. patent does not teach or suggest the inclusion of "particles each having a core-shell structure".

The Smith et al. patent is not relied upon to teach or suggest "particles each having a core-shell structure"

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues the Lee et al. patent does not describe each proportion of PET (polyethylene terephthalate) and PBT (polybutylene terephthalate) being blended, nor Examples using a blend of PET and PBT.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., proportion of PET or PBT blended) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the Lee et al. patent does not teach the use of the polyamide resin composition as an inner layer material of a hose for motor vehicles nor is there a teaching or suggestion in the Lee et al. patent regarding the use of PET and PBT as the inner layer.

The Lee et al. patent is not relied upon to teach or suggest the use of the polyamide resin composition as an inner layer material of a hose for motor vehicles or the use of PET and PBT as the inner layer.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that the Lee et al. patent primarily relates to a polyamide resin composition, while the Smith et al. patent relates to a fuel transport hose constructed of

a specific polyester resin such as a polybutylene terephthalate. Applicant argues that a polyamide resin and a polyester resin are completely different and one of ordinary skill in the art could not predict the combination of these two resins.

The core-shell properties will impart same properties to the polyamide composition comprising polyester of Lee et al. as it would to the polyester composition of Smith et al. (i.e. flexibility, workability, impact resistance under cold environment. Therefore, there is sufficient motivation to combine the teachings of Smith et al. and Lee et al.

Applicant argues that the Kawazura et al. patent does not teach or suggest the characteristic structure of the fuel hose as presently claimed where at least the inner layer of the fuel hose is composed of a material prepared by blending a predetermined proportion of particles of a core-shell structure in a specific polyester resin.

Kawazura et al. is not relied upon to teach or suggest the characteristic structure of the fuel hose where at least the inner layer of the fuel hose is composed of a material prepared by blending a predetermined proportion of particles of a core-shell structure in a specific polyester resin.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that the lio et al. patent does not teach or suggest the characteristic structure of the fuel hose as presently claimed where at least the inner layer of the fuel hose is composed of a material prepared by blending a predetermined proportion of particles of a core-shell structure in a specific polyester resin.

lio et al. is not relied upon to teach or suggest the characteristic structure of the fuel hose where at least the inner layer of the fuel hose is composed of a material prepared by blending a predetermined proportion of particles of a core-shell structure in a specific polyester resin.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Wartalowicz
January 9, 2006


COLLEEN P. COOKE
PRIMARY EXAMINER